

distance of nearly a mile. At Vicksburg, Miss., a very violent thunder-storm occurred on the 5th. The wind shifted to north and northeast, and attained the velocity of forty miles per hour. On the 14th, at Corsicana, Texas, during the heavy thunder-storm the lightning was fearful, and 3.90 inches of water fell. The creeks overflowed their banks and carried away houses, &c. Spartanburg, S. C., was visited on the same date by a severe wind, rain and hail-storm, damaging buildings and crops.

United States steamer Rio Bravo encountered a heavy southerly gale during the night of the 13th, fifteen miles from Sabine light, on the coast of Texas. The vessel was badly damaged and run ashore. A schooner was struck by lightning on the 16th off Sandy Hook, N. J. Off Chatham, New Brunswick, a schooner was damaged by a whirlwind.

TEMPERATURE OF THE AIR.

The isothermal lines for the month appear on Chart No. II, while in the left-hand lower corner of the same is a table giving the average temperatures, by districts, for the month. In all the districts, excepting New England, the weather has been cooler than usual, especially from the Gulf coast to the Upper Lake region and the Northwest. The difference is greatest in the upper Mississippi and lower Missouri valleys. It has been slightly warmer than August, 1873, in New England and eastern New York, but otherwise generally cooler. Compared with August of last year, the temperature averages a little higher in New England, eastern New York, New Jersey and on the Pacific coast. In the other sections it averages lower, especially in the Southwest, where the difference is as much as 8°. The following are the minimum temperatures for the several districts: Escanaba, 38°; Pembina, 26°; Pike's Peak, 24°; Cleveland and Buffalo, 48°; Mt. Washington, 28°; Burlington, Vt., 46°; New York, 55°; Wytheville, Va., 48°; Charleston, 67°; Bismarck, D. T., 39°; Virginia City, M. T., 33°; Dubuque, 41°; St. Louis, 55°; Memphis, 63°; Corsicana and Shreveport, 64°; Montgomery, 65°; Key West, 73°. Maximum temperatures—Bismarck, 91°; St. Paul and Dubuque, 90°; Milwaukee, 89°; Erie, 87°; Mt. Washington, 61°; Burlington, Vt., 87°; Portland, Me., 90°; Wood's Hole, Mass., and Newport, 81°; New York, 90°; Wilmington, N. C., 92°; Key West and Augusta, Ga., 91°; Jacksonville, 95°; Montgomery, 94°; Shreveport, 104°; Nashville, 89°; Louisville, 88°; Leavenworth, 90°; Denver, 96°; Pike's Peak, 55°. The greatest range of temperature (59°) was at Pembina, D. T., and the least (18°) at Key West.

Frost.—Light frosts were reported to have occurred on the 1st in northeastern Pennsylvania; the 19th in Iowa; 20th in Ohio; 23d, 24th and 25th in New York; 27th in New York, Pennsylvania and Wyoming Territory; 28th in Iowa; 29th in Minnesota; heavy and destructive frosts on the 21st in Minnesota; the 22d in Illinois, Iowa, Michigan, Wisconsin and Minnesota; the 23d in Wisconsin, Michigan, Iowa, Illinois, Indiana and Ohio. Some of the above have been spoken of in connection with the movement of areas of high barometer.

PRECIPITATION.

Chart No. III shows the distribution of the rain-fall. The table upon the same, giving the average by districts, furnishes the means of comparing it with the average for years. It shows that the precipitation has been above the average, excepting in the St. Lawrence valley, Tennessee and the Ohio valley, and on the Pacific coast. The very large excess in the Middle Atlantic States is due principally to the storms of the 2d and 3d; the 7th; 11th, 12th and 13th; and the 17th and 18th. The rain-fall has also been heavier than for August, 1874, in the St. Lawrence valley, Middle Atlantic States, South Atlantic States, East Gulf States, West Gulf States, Lake region, upper Mississippi and lower Missouri valleys and Minnesota.

Cloudy days.—The number of cloudy days, (other than those on which rain fell) averages as follows: In New England, 4; Middle Atlantic States, 2; South Atlantic States, 4.2; Gulf States, 2.4; Ohio valley and Tennessee, 2.5; Lower Lake region, 3; Upper Lake region, 1.6.

Rainy days.—The number of days during which rain fell is decidedly above the average for the month in all the districts except the Northwest: In New England the average number of days being 12.2; Middle Atlantic States, 18.2; South Atlantic States, 14.4; Gulf States, 12.4; Ohio valley and Tennessee, 9.8; Lower Lake region, 13.5; Upper Lake region, 13.5; the Northwest, 10.6.

In southeastern Indiana the greater portion of the rain fell during the first part of the month. The latter part is reported to have been very dry, and the crops suffering from drought.

Unusually heavy rains, and destructive floods resulting therefrom, have generally been mentioned under the head of storms.

The heaviest total rain-falls reported from the different States for the month are, at Gardiner, Me., 6.60 inches; Contoocookville, N. H., 6.10; Norwich, Vt., 4.10; Springfield, Mass., 9.38; Newport, R. I., 5.26; Colebrook, Conn., 14.39; New York city, 10.42; Trenton, N. J., 14.08; West Chester, Pa., 9.67; Milford, Del., 11.75; Woodlawn, Md., 11.81; Washington, D. C., 12.93; Hampton, Va., 14.41; Morgantown, W. Va., 5.58; Goldsboro', N. C., 11.45; Greenville, S. C., 7.80; Gainesville, Ga., 7.62; Punta Rassa, Fla., 12.14; Mobile, Ala., 7.07; Vicksburg, Miss., 8.85; Pt. Pleasant, La., 11.68; Denison, Texas, 9.30; Hot Springs, Ark., 2.60; Fort Gibson, I. T., 4.44; Cleveland, Tenn., 8.45; Newport Barracks, Ky., 3.73; Kenton, O., 7.92; Indianapolis, Ind., 3.66; Traverse City, Mich., 7.15; Escanaba, Mich., 12.06; Embarrass, Wis., 7.70; Sandwich, Ill., 5.40; Corning, Mo., 3.60; Rockford, Iowa, 7.60; Ft. Snelling, Minn., 8.82; Ft. Randall, D. T., 5.15; Norfolk, Neb., 16.10; Bellville, Kan., 7.90; Pike's Peak, Col., 3.52; Fort D. A. Russell, W. T., 9.00.

Snow.—On the summit of Pike's Peak, C. T., snow fell from the 11th to the 15th; 18th to the 23d; on the 25th and 27th.

Hail.—Hail fell upon sixteen days of the month on Pike's Peak; on the 3d at Fort Snelling, Minn.; 4th, Flushing, N. Y., Nebraska and Wyoming Territory; 5th, Ringgold, Ohio; 6th, McMinnville, Tenn.; 7th, Alabama, Virginia and Wyoming; 10th, Illinois and Virginia; 14th, South Carolina and Wyoming; 16th, Colorado, Wyoming, Ohio and New York; 18th, Indiana; 19th, Wyoming and Ohio; 20th, Minnesota; 21st, Pennsylvania, Michigan and Wyoming; 24th and 27th, Minnesota.

RELATIVE HUMIDITY.

The relative humidity averages, for the different districts, as follows: in New England, 77 per cent.; on the New Jersey coast, 86; in the Middle Atlantic States, 78; South Atlantic States, 76; Gulf States, 75; Ohio valley and Tennessee, 71; Lower Lake region, 73; Upper Lake region, 73; the Northwest, 68. It is above the average in all the districts, especially in the Middle States and Lower Lake region. For Denver, Col., and Santa Fé, N. M., the mean for the month is 47 per cent.

WINDS.

The prevailing winds for the month are shown by the arrows upon Chart No. II. They have been southerly at the majority of stations, and from the high pressure area toward the low. The effect of local influences will be seen at Boston, Pittsburgh, Lynchburg, Nashville, Memphis, Cincinnati, Marquette, &c. The highest wind-velocities, in miles per hour, have been mentioned in connection with the general storms, during the passage of which they occurred. The total movement of the air, independent of direction, averages,